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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Shingo TAKEDA et al.**

Serial Number: **Not Yet Assigned**
(PCT/JP00/00536)

Filed: **July 30, 2001**

For: **WATER-BORNE URETHANE RESIN COMPOSITION FOR FORMING
MICROPOROUS LAYER, METHOD OF PRODUCING FIBROUS SHEET-
LIKE COMPOSITE, AND ARTIFICIAL LEATHER**

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

July 30, 2001

Sir:

Prior to the calculation of the filing fees of the above application, please amend the application as follows:

IN THE CLAIMS:

Please amend claims 3, 4, 6-8 and 11-17 as follows:

3. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in claim 1, wherein said water-borne urethane resin (1) is a water-borne urethane resin having an average particle diameter of 0.1 to 5 μm .

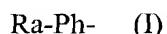
Shingo TAKEDA et al.

Docket No. 010973

4. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in claim 1, wherein said water-borne urethane resin (1) is a water-borne urethane resin dispersed with a nonionic emulsifier having HLB of 10 to 18.

6. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in claim 1, wherein said associated type thickener (2) has a hydrophobic group located at at least one terminal and also has a urethane bond in a molecular chain.

7. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in claim 1, wherein said associated type thickener (2) has a structure represented by the following structural formula (I):



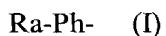
wherein R is a C₁ to C₉ alkyl, aryl or alkylaryl group; a represents an integer of 1 to 3; and Ph represents a phenyl ring residue.

8. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in claim 1, wherein said water-borne urethane resin (1) contains (A) a polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide and/or (B) a one terminal polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide.

Shingo TAKEDA et al.

Docket No. 010973

11. (Amended) A method of producing a fibrous sheet-like composite as claimed in claim 9, wherein said nonionic emulsifier has a structure represented by the following structural formula (I):



wherein R is a C₁ to C₉ alkyl, aryl or alkylaryl group; a represents an integer of 1 to 3; and Ph represents a phenyl ring residue.

12. (Amended) A method of producing a fibrous sheet-like composite as claimed in claim 9, wherein said associated type thickener is an associated type thickener which has a hydrophobic group located at at least one terminal and also has a urethane bond in a molecular chain.

13. (Amended) A method of producing a fibrous sheet-like composite as claimed in claim 9, wherein said water-borne urethane resin is a water-borne urethane resin which contains (A) a polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide and/or (B) a one terminal polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide.

14. (Amended) A method of producing a fibrous sheet-like composite as claimed in claim 9, wherein steam temperature is from 70 to 120°C.

Shingo TAKEDA et al.

Docket No. 010973

15. (Amended) A method of producing a fibrous sheet-like composite as claimed in claim 9, wherein steam treatment time is from 10 seconds to 20 minutes.

16. (Amended) A method of producing a fibrous sheet-like composite as claimed in claim 9, which further comprises drying at a temperature of 80 to 150°C after heat-sensitive coagulation with steam.

17. An artificial leather obtained by the method of claim 9.

Shingo TAKEDA et al.

Docket No. 010973

REMARKS

The above amendment is believed to place the claims in proper condition for examination.

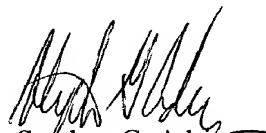
Early and favorable action is awaited.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

In the event there are any additional fees required, please charge our Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN, HATTORI,
McLELAND & NAUGHTON, LLP



Stephen G. Adrian
Reg. No. 32,878

Atty. Docket No. 010973
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
Tel: (202) 659-2930
SGA/yap

Shingo TAKEDA et al.

Docket No. 010973

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 3, 4, 6-8 and 11-17 have been amended as follows:

3. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in claim 1 [or 2], wherein said water-borne urethane resin (1) is a water-borne urethane resin having an average particle diameter of 0.1 to 5 μm .

4. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in [any one of claims 1 to 3] claim 1, wherein said water-borne urethane resin (1) is a water-borne urethane resin dispersed with a nonionic emulsifier having HLB of 10 to 18.

6. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in [any one of claims 1 to 5] claim 1, wherein said associated type thickener (2) has a hydrophobic group located at at least one terminal and also has a urethane bond in a molecular chain.

7. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in [any one of claims 1 to 6] claim 1, wherein said associated type thickener (2) has a structure represented by the following structural formula (I):

Ra-Ph- (I)

wherein R is a C₁ to C₉ alkyl, aryl or alkylaryl group; a represents an integer of 1 to 3; and Ph represents a phenyl ring residue.

8. (Amended) A water-borne urethane resin composition for forming a microporous layer as claimed in [any one of claims 1 to 7] claim 1, wherein said water-borne urethane resin (1) contains (A) a polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of

Shingo TAKEDA et al.

Docket No. 010973

ethylene oxide and/or (B) a one terminal polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide.

11. (Amended) A method of producing a fibrous sheet-like composite as claimed in claim 9 [or 10], wherein said nonionic emulsifier has a structure represented by the following structural formula (I):

Ra-Ph- (I)

wherein R is a C₁ to C₉ alkyl, aryl or alkylaryl group; a represents an integer of 1 to 3; and Ph represents a phenyl ring residue.

12. (Amended) A method of producing a fibrous sheet-like composite as claimed in [any one of claims 9 to 11] claim 9, wherein said associated type thickener is an associated type thickener which has a hydrophobic group located at at least one terminal and also has a urethane bond in a molecular chain.

13. (Amended) A method of producing a fibrous sheet-like composite as claimed in [any one of claims 9 to 12] claim 9, wherein said water-borne urethane resin is a water-borne urethane resin which contains (A) a polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide and/or (B) a one terminal polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide.

14. (Amended) A method of producing a fibrous sheet-like composite as claimed in [any one of claims 9 to 13] claim 9, wherein steam temperature is from 70 to 120°C.

15. (Amended) A method of producing a fibrous sheet-like composite as claimed in [any one of claims 9 to 14] claim 9, wherein steam treatment time is from 10 seconds to 20 minutes.

Shingo TAKEDA et al.

Docket No. 010973

16. (Amended) A method of producing a fibrous sheet-like composite as claimed in [any one of claims 9 to 15] claim 9, which further comprises drying at a temperature of 80 to 150°C after heat-sensitive coagulation with steam.
17. An artificial leather obtained by the method of [any one of claims 9 to 16] claim 9.